

PUHE-501: Introduction to Statistical Reasoning

This course is intended to provide students with a broad overview and understanding of statistical methods used in public health and medical research. The emphasis is to afford students the understanding of fundamental theoretical concepts, interpretation, and application to public health data. The overall purpose is to introduce students to basic probability concepts and statistical techniques that are utilized in public health and biomedical research. The objective is to be able to integrate data analyses into general public health planning and support public health research and policy decision-making. Students will be able to critically appraise public health reports and current literature and analyze public health and biomedical data using descriptive statistics and inferential statistics methods. Topics will include measures of central tendency, measures of variability and exploratory data analyses techniques, and sampling methods. Inferential methods will include concepts of hypotheses, and hypothesis testing, and decision making. Approaches to be covered will include T-test, F-test, oneway ANOVA, Chi-Square tests, and linear regression analysis. Students will be introduced and use representative statistical software tools to evaluate data quality and perform data analysis with relevant public health implications. Students will also be able to communicate and interpret statistical results in a professional and consistent manner with expectations for members of the public health profession.

Credits: 3

Program: Master Of Public Hth Program